

CLAIMS

1. A method of testing the strength of a glass container, comprising pressurising the container, the container failing the test if it breaks,

wherein the container is pressurised to be subjected to a pressure profile which in a first stage increases from a starting pressure to a peak pressure at a first average rate of pressure increase, and which in a second stage decreases from the peak pressure to the starting pressure at a second, greater, average rate of pressure decrease.

2. A method as claimed in claim 1, wherein the second stage of the pressure profile involves reducing the pressure substantially instantaneously to the starting pressure.

3. A method as claimed in any preceding claim, wherein the starting pressure is atmospheric pressure.

4. A method as claimed in claim 3, wherein the first stage of the pressure profile involves ramping the pressure substantially linearly to the peak pressure.

5. A method as claimed in any preceding claim, wherein pressurising the container comprises filling the container with a liquid and pressurising the liquid.

6. A method as claimed in claim 5, wherein the pressure is applied by first sealing the container and applying the pressure hydrostatically using the liquid.

7. A method as claimed in claim 6, wherein water is used to apply the pressure hydrostatically.

8. A method as claimed in 6 or 7, wherein the container seal is applied using an o-ring which seals under hydrostatic pressure.

9. A method as claimed in claim 8, wherein the pressure is released in the second stage by opening a hydraulic valve.

10. A method as claimed in claim 8, wherein the pressure is applied using a mechanical servo driven drive and the pressure is released in the second stage by a pneumatic cylinder.

11. A method as claimed in any preceding claim, wherein the container is subjected to a plurality of the tests.

12. A method as claimed in any preceding claim, wherein the first stage of the pressure profile has a duration of 30 – 250ms.

13. A method as claimed in claim 12, wherein the first stage of the pressure profile has a duration of 40 – 70ms.

14. A method as claimed in any preceding claim, wherein the second stage of the pressure profile has a duration of 0-10ms.

15. A method as claimed in claim 14, wherein the second stage of the pressure profile has a duration of 0-2ms.

16. A method as claimed in any preceding claim, wherein the second stage immediately follows the first stage.

17. A method as claimed in any preceding claim, wherein the peak pressure is in the range 300-900 Bar.

18. A method as claimed in claim 17, wherein the peak pressure is in the range 300-700 Bar.

19. A method as claimed in any preceding claim, wherein the pressure to which the container is subjected is controlled using feedback from a pressure sensor.

20. A method as claimed in any preceding claim, wherein the container comprises a glass capsule for a needle-less injector.

21. A method of testing a batch of containers comprising applying to each container of the batch a method as claimed in any preceding claim.